

## Alcimedès

A whole edition of *Forensic Science International* (2006; **163**:161–248) has been devoted to a forensic science that Alcimedès previously knew little about. Forensic palynology is the application of pollen and spores to solving legal issues and has apparently been a law enforcement tool for over 50 years. Locard's principle that every contact leaves a trace applies particularly to pollen and spores, which are often characteristic of specific environments and scenes and can thus provide important clues as to their source of origin. They are easily picked up and transported away from scenes of interest without providing any visual clue to a suspect as to what has occurred and their usefulness lies in a combination of their abundance, dispersal mechanisms, resistance to mechanical and chemical destruction, microscopic size, and morphology.

The European Monitoring Centre of Drugs and Drug Addiction ([www.emcdda.europa.eu](http://www.emcdda.europa.eu)) has published a paper on the emerging trend in the use of hallucinogenic mushrooms. In Europe, most of the mushrooms used recreationally are cultivated rather than picked wild. The range of lifetime use throughout the 12 EU Member States is less than 1–8%. Unpredictable potency and negative effects such as, nausea, panic attacks, and/or lack of sociable effects may all contribute to limiting the recreational use of hallucinogenic mushrooms. Reports in the UK suggest that the recent change in legislation has had an impact on the availability of mushrooms and overall volume of internet sales.

“Trying to evaluate the credibility of defendants and witnesses whose testimony has been biased by the presence of alcohol in their system continually frustrates expert witnesses.” Perry et al (*J Forensic Sci* 2006;**51**(4):896–899) have therefore set out to investigate the association between measured blood alcohol concentration (BAC) and the presence and degree of amnesia – no amnesia, ‘grayout’ (partial anterograde amnesia), or blackout (complete anterograde amnesia) in actively drinking subjects. A strong linear relationship between BAC and the predicted

probability of memory loss particularly for blackouts was obvious and clinically subjects with a BAC of 310 mg/ml or greater have a 0.50 or greater probability of having an alcoholic blackout.

The annual number of homicide convictions in England and Wales is increasing. A national clinical survey based on a 3-year (1996–1999) consecutive sample of people convicted of homicide in England and Wales has been published (*Addiction* 2006;**101**:1117–1124). Of the 1594 homicide perpetrators, more than one-third (42%) had a history of alcohol misuse or dependence and 40% had a history of drug misuse and dependence. Alcohol or drug misuse played a contributory role in two-fifths of homicides. Significantly forty-two homicides (17%) were committed by patients with severe mental illness and substance misuse, which emphasises the need for forensic physicians to remember the significant co-morbidity of drug dependence and mental illness in detainees in police custody, as these vulnerable individuals need particularly careful assessment in relation to the increased risk of self-harm and the need for ‘appropriate adults’.

Less-lethal weapons are used by police forces around the world as an alternative to firearms for the restraint and control of violent individuals. In Switzerland, police forces have been equipped with the Flash-Ball<sup>®</sup>, a firearm designed to deliver various types of ammunition at muzzle kinetic energies close to 200 Joules. One such type of ammunition is a rubber ball designed to deliver a blunt impact without piercing the skin. The manufacturer describes the gun as “a revolutionary defence weapon” with a “dissuasive look and detonation” that “provokes on impact the equivalent of a technical K.O.”. A case report of two patients shot with the Flash-Ball<sup>®</sup> and an associated literature review reminds us that impacts at such energies may still create major trauma with associated severe injuries to internal organs (*J Emerg Med* 2006; **31**: 325–330).